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CURRICULUM SUBCOMMITTEE AGENDA

2 February 2012

A meeting of the Curriculum Subcommittee of the Educational Policies Committee will be held on 2 February 2012 at 2 p.m. in Old Main 136 (Champ Hall Conference Room).

Approval of the minutes of the 12 January 2012 meeting (see below)

College of Agriculture

Department of Landscape Architecture and Environmental Planning

New Course

LAEP 2039	Foundations of Sustainable Systems	3 cr.
	Effective Fall 2012	

Caine College of the Arts

Department of Theatre Arts

Prerequisite Change

THEA 2490	Intermediate Acting: Shakespeare	3 cr.
	Prerequisites: THEA 1033, 1713 and 2033	
	Effective Spring 2013	

Huntsman School of Business

Credit Hour Change

BUS 2000	Foundations for International Program	1-3 cr.
	Previously 3 cr.	
	Repeatable for credit	
	Effective Spring 2012	

School of Accountancy

Title Change

ACCT 6350	Accounting for Management Decision Making	3 cr.
	Previously Accounting Strategies for Achieving Profit Goals	
	Effective Fall 2012	

Department of Management

Prerequisite Change

MGT 3200	Business Career Management	2 cr.
	Prerequisites: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits	
	Effective Spring 2013	

MGT 3530	New Venture Marketing Prerequisites: MGT 3510; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	2 cr.
MGT 3570	New Venture Social Responsibility Prerequisites: MGT 3510; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	2 cr.
MGT 3580	New Venture Execution Prerequisites: Permission of instructor; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	2 cr.
MGT 3670	Employee Relations and Contract Negotiations Prerequisites: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	3 cr.
MGT 3800	Leadership Prerequisites: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	2 cr.
MGT 3830	International Law Prerequisites: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	2 cr.
MGT 3900	Strategic Marketing in Hospitality and Tourism Prerequisites: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	3 cr.
MGT 3910	Revenue and Cost Management in Hospitality and Tourism Prerequisites: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	3 cr.
MGT 3920	Hospitality Management and Operations Prerequisites: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	3 cr.

MGT 3930	Tourism and Events Administration Prerequisites: MGT 3900, 3910, 3920; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	3 cr.
MGT 4525	New Product Development Prerequisites: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	2 cr.
MGT 4535	Pricing Strategy Prerequisites: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits. Effective Spring 2013	2 cr.
MGT 4560	Strategic Sales Management Prerequisites: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits Effective Spring 2013	2 cr.
MGT 4570	Consumer Choice Modeling Prerequisites: Grade of B- (2.67) or better in MGT 3500; STAT 1040 or 2300 or 3000; PSY 2800; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits. Effective Spring 2013	2 cr.
MGT 4600	Negotiations Prerequisites: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits. Effective Spring 2013	2 cr.
Credit Hour Change, Add Repeatable for Credit		
MGT 6870	Global Strategic Thinking Previously 1-3 cr. Repeatable for credit Effective Fall 2012	.5-3 cr

Department of Management Information Systems

Course Number Change, Prerequisite Change, Course Description Change

MIS 3200	Business Communication Previously MIS 2200 Prerequisite: Grade of C or better in ENGL 2010 Effective Spring 2013	3 cr.
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Emma Eccles Jones College of Education and Human Services
School of Teacher Education and Leadership

Prerequisite Change

TEAL 6350	Reading Assessment and Intervention	3 cr.
	No prerequisites needed	
	Effective Fall 2012	

Department of Communicative Disorders and Deaf Education

Course Number Change

COMD 3010	Sign Language I	4 cr.
	Previously COMD 2910	
	Effective Spring 2013	

Department of Family, Consumer, and Human Development

Prerequisite Change

FCHD 4820	Current Issues in Family Life Studies	3 cr.
	Prerequisite: Enrollment limited to Family Life Studies majors	
	Effective Spring 2013	

College of Engineering

Department of Civil and Environmental Engineering

Prerequisite Change

CEE 5001/6001	Field Irrigation Systems Design and Evaluation	3 cr.
	No prerequisites needed	
	Effective Fall 2012	

College of Humanities and Social Sciences

Department of English

Delete Course

ENGL 4370	Studies in Nonfiction Prose	3 cr.
	Repeatable for Credit	
	Effective Fall 2012	

Department of Languages, Philosophy and Speech Communication

New Course

LING 6350	Pro-Seminar on Second Language Teaching	1-3 cr.
	Effective Fall 2012	

College of Natural Resources

Department of Environment and Society

New Course

ENVS 3400	Fundamentals of Tourism Effective Fall 2012	3 cr.
ENVS 4700	Communicating Sustainability Effective Fall 2012	3 cr.

Other Business

Request from the Department of Art and Design to offer the interior design specialization (as a Plan B option) within the Master of Fine Arts degree (see below)

Request from the Departments of Landscape Architecture and Environmental Planning (College of Agriculture) and Environment and Society (College of Natural Resources) to create a Sustainable Systems Minor (see below)

Request from Utah State University to establish a university-wide STE²M center (see below)

Course Approval Form

Work continues on producing a form and a workflow approval process. The workflow approval process will be similar to the travel authorizations.

Milestones and dates:

Development complete by the first of April

Testing with Cathy complete by first of May

Pre-production testing with several volunteers complete by July 31st

Go-live in production on August 1st

Demonstration to the Curriculum Subcommittee on September 6th

CURRICULUM SUBCOMMITTEE MINUTES
12 January 2012

A meeting of the Curriculum Subcommittee of the Educational Policies Committee was held on 12 January 2012 at 2 p.m. in Old Main 136 (Champ Hall Conference Room).

Present:

Ed Reeve, Chair, College of Engineering
Clay Isom, Agriculture (representing Tom Bunch)
Darrin Brooks, Caine College of the Arts
Scott Hunsaker, Emma Eccles Jones College of Education and Human Services
Patricia Gantt, College of Humanities and Social Sciences
Nancy Mesner, College of Natural Resources
Richard Mueller, College of Science
Wendy Holliday, Libraries
Travis Peterson, Regional Campuses and Distance Education
Michelle Fleck, USU-Eastern
Norm Jones, General Education Subcommittee Chair
Steve Beck, Graduate Council (representing Shelly Lindauer)
Roland Squire, Registrar's Office
Michele Hillard, Provost Office (representing Cathy Gerber)

Absent:

Tanner Wright, Academic Senate President
Cami Jones, Graduate Studies Vice President
Jeff Doyle, Huntsman School of Business

Visitor: Larry Smith, Vice Provost

Norm Jones moved to approve the minutes of the 1 December 2011 meeting. Wendy Holliday seconded, motion approved.

Richard Mueller moved to approve the business of Utah State University (Student Services).

Nancy Mesner seconded; motion approved.

Utah State University (Student Services)

Course Prefix Change

USU 1160	Developing Self-Management Skills Previously MGT 1160 Effective Spring 2013	1 cr.
USU 2160	Student Applied Leadership Training Previously MGT 2160 Repeatable for credit Effective Spring 2013	1-3 cr.

Darrin Brooks move to approve the business of the Caine College of the Arts. Richard Mueller seconded; motion approved.

Caine College of the Arts

Department of Theatre Arts

Prerequisite Change

THEA 5750/6750	Repertory Theatre Production	2-8 cr.
	Prerequisite: permission of Theatre Arts Department staff	
	Repeatable for credit	
	Effective Summer 2012	

Scott Hunsaker moved to approve the business of the Emma Eccles Jones College of Education and Human Services. Richard Mueller seconded; motion approved.

Emma Eccles Jones College of Education and Human Services

Department of Health, Physical Education and Recreation

New Course

PEP 6300	Seminar in Human Movement Sciences	1 cr.
	Effective Fall 2012	

Department of Psychology

Grade Mode Change

PSY 6850	Introduction to the Combined Doctoral Program	1 cr.
	Change to Pass/Fail only	
	Effective Summer 2012	
PSY 7850	Internship and Professional Development Seminar	1 cr.
	Change to Pass/Fail only	
	Effective Summer 2012	

Richard Mueller moved to approve the business of the College of Engineering. Wendy Holliday seconded; motion approved.

College of Engineering

Department of Mechanical and Aerospace Engineering

Prerequisite Change

MAE 3600	Engineering Professionalism and Ethics	1 cr.
	Prerequisite: Admitted into the Professional Program	
	Effective Spring 2013	
MAE 5640	Design for Manufacturability	3 cr.
	Prerequisites: MAE 2160 and 4300	
	Effective Spring 2013	
MAE 6440	Advanced Computational Fluid Dynamics	3 cr.
	Prerequisites: MAE 5440 and 6410	
	Effective Spring 2013	

Patricia Gantt moved to approve the business of the College of Humanities and Social Sciences. Norm Jones seconded; motion approved.

College of Humanities and Social Sciences

Department of Languages, Philosophy and Speech Communication

New Course

CHIN 4100	Teaching Chinese as a Foreign Language	3 cr.
	Prerequisite: CHIN 3100 or equivalent or permission of instructor	
	Effective Fall 2012	

Nancy Mesner moved to approve the business of the College of Natural Resources. Richard Mueller seconded; motion approved.

College of Natural Resources

Department of Wildland Resources

New Course

WILD 6401	Population State Variables	2 cr.
	Prerequisite: STAT 5100 or WILD 6500	
	Effective Fall 2012	
WILD 6402	Demographic Vital Rates	1 cr.
	Prerequisite: STAT 5100 or WILD 6401 or WILD 6500	
	Effective Fall 2012	
WILD 6403	Dynamics of Structured Populations	2 cr.
	Effective Fall 2012	

Richard Mueller moved to approve the business of the College of Science. Norm Jones seconded; motion approved.

College of Science

Department of Biology

Prerequisite Change

BIOL/NR 2220	General Ecology	3 cr.
	Prerequisite: BIOL 1610	
	Prerequisite or corequisite: BIOL 1620	
	Effective Fall 2012	

Department of Geology

New Course

GEO 6820	Graduate Seminar Series	1 cr.
	Repeatable for credit	
	Pass/Fail only	
	Effective Fall 2012	

Prerequisite Change, Course Description Change
GEO/WATS 3600 Geomorphology 4 cr.
Prerequisites: GEO 3200, MATH 1060 or instructor permission
Effective Spring 2013

Title Change, Credit Hour Change, Add Multiple List
GEO 6800 Graduate Seminar 1-6 cr.
Previously Seminar, 1-4 cr.
Repeatable for credit
Add Multiple list of GEO 7800
Effective Fall 2012

Other Business

Scott Hunsaker moved to approve the request from the Department of Management to create a Hospitality and Tourism Management Minor. Richard Mueller seconded. Motion was approved pending formatting changes. Revised proposal will be sent to Larry Smith. (see below)

Nancy Mesner moved to approve the request from the Department of Environment and Society to discontinue the PhD in Recreation Resource Management. Richard Mueller seconded; motion approved. (see below)

Meeting adjourned 2:20 p.m.
Ed Reeve conducted the meeting.
Michele Hillard recorded the minutes.

Section I: Request

The Utah State University Art Department seeks to obtain approval to offer the interior design specialization (as a Plan B option) within the Master of Fine Arts degree commencing Fall Semester 2012. All required courses for the proposed specialization are currently offered within the existing MS degree in Human Environments (please see attached course requirements), and no change is anticipated in departmental instructional activities. It is anticipated that the addition of several MFA interior design students will have a positive impact and provide additional diversity to the current group of students pursuing the Master of Fine Arts degree in the Art Department.

Section II: Need

The Art Department at Utah State University consists of several areas: Ceramics, Painting and Drawing, Graphic Design, Photography, Printmaking, and Sculpture. A Master of Fine Arts with a specialization is currently offered in each of these areas. In July 2011, the interior design program became an administrative subset of the Art Department. Thus from an administrative point of view it makes sense to add the interior design specialization for this terminal degree (MFA).

In the interior design profession, the MFA is considered the current terminal degree of choice. In the past, it has been necessary for students to travel out-of-state to complete a terminal degree in interior design. The demand for education in interior design has increased significantly over the past decade. The majority of searches for tenure-track positions in interior design at universities indicate a preference not only for candidates who demonstrate high-level interior design experience, but also for those who have terminal degrees in interior design. Given the expressed interest by current and former students, and the encouragement by professionals in the field, enrollment in the proposed MFA graduate program is virtually a certainty at the outset. Informal surveys of past interior design graduating seniors at Utah State University conducted over the last two years indicated that nearly a third of the students would have been interested in pursuing a MFA degree with a specialization in interior design if they had been given the opportunity.

No other academic units in the intermountain region offer a MFA degree with a specialization in interior design. San Diego State University is the only other public institution in the western United States that offers a MFA degree with a specialization in interior design. As the Caine College of the Arts expands its reputation in interior design, adding a Master of Fine Arts with a specialization in interior design provides further depth to USU's program.

Section III: Institutional Impact

In the past, the interior design program offered only a Master of Science in Human Environments (with a specialization in interior design). This MS degree is designed for individuals who already have undergraduate degrees in non-design-related areas. There is a demand for this MS degree and it will continue to be offered. However, it is currently a non-terminal, first professional degree that does not address the needs stated above. Because of the small number of these MS interior design graduate students, classes/studios have often been under-enrolled. The new MFA interior design specialization is tooled and designed for students who already have the first professional degree – a Bachelor of Interior Design (BID) or a similar design-related degree. We anticipate that by offering this MFA specialization our existing graduate class/studio size will grow to sufficient size to better utilize facilities and personnel. By joining the Art Department and gaining access to the existing graduate resources within the Art Department, the interior design program now has the personnel and facilities to offer this MFA degree specialization with no significant impact to the institution.

Section IV: Finances

Since all classes for the proposed program are currently funded by existing resources, no need for new funds is anticipated. No budgetary impact is anticipated for any other programs or units.

Program Requirements – Interior Design

Master of Fine Arts with a specialization in Interior Design
Post Professional Degree
Three-Year Program

A three-year course of study allows students with an undergraduate degree in interior design to obtain a Master of Fine Arts with a specialization in interior design. The MFA is the terminal degree. Its primary emphasis is on the creative aspects of the student's work. The MFA requires a minimum of five semesters of intensive study and 60 semester hours of credit.

Credit Hours

Students must earn 60 credits, to include:

42 credits of graduate-level studio art as determined by the student in consultation with his or her major professor, including a minimum of:

- ☐ 6 credits studio art outside of the declared emphasis area
- ☐ 3 Credits of ART 6900 Graduate Seminar: Professional Practices
- ☐ 3 Credits of ARTH 6900 Graduate Seminar: Issues in Contemporary Art
- ☐ 3 credits of Graduate Interdisciplinary Critique
- ☐ 6 credits outside the art department as specified by the supervisory committee
- ☐ 3 credits of Plan "B" Project, which concludes with an MFA plan "B" project exhibition and an oral defense. The MFA plan "B" project is a visual presentation, the equivalent of a written dissertation in other disciplines. The plan "B" project exhibition is the single most important feature of the MFA program; the culmination of at least two years, and often three or more years, of intensive study in a single discipline. In conjunction with the plan "B" project exhibition, students must submit visual documentation of the graduate project, in the form of a digital image portfolio.

Sample Program of Study

Year One			Undergrad. Credit	Grad. Credit
Fall Semester				
ART 6900	Graduate Seminar	F		3
Elective	Elective	F		3
ID 6730	Advanced I.D. Studio	F		6
Spring Semester				
ARTH 6900	Graduate Seminar	S		3
Art Elective	Art Elective	S		3
ID 6730	Advanced I.D. Studio	S		6

24 credits

Year Two			<u>Undergrad. Credit</u>	<u>Grad. Credit</u>
Fall Semester				
ART	Inter. Critique	F		3
Elective	Elective	F		3
ID 6730	Advanced I.D. Studio	F		6
Spring Semester				
ID Elective	ID Elective	S		3
Art Elective	Art Elective	S		3
ID 6730	Advanced I.D. Studio	S		6
				24 credits

Year Three			<u>Undergrad. Credit</u>	<u>Grad. Credit</u>
Fall Semester				
ID 6730	Advanced I.D. Studio	F		3
ID Elective	I.D. Elective	F		3
Spring Semester				
ID Elective	I.D. Elective	S		3
ID 6970	Thesis Research	S		3
				12 credits

Institution Submitting Proposal: Utah State University

Colleges in Which Program/Administrative Unit Will Be Located: College of Agriculture and College of Natural Resources

Lead Departments in Which Program/Administrative Unit Will Be Located:
Department of Landscape Architecture and Environmental Planning (LAEP) in the College of Agriculture and Department of Environment and Society (ENVS) in the College of Natural Resources

Program/Administrative Unit Title: Sustainable Systems Minor

Proposed Beginning Date: Fall Semester, 2012

Institutional Signatures:

Raymond T. Coward, Chief Academic Officer: _____

Noelle Cockett, Dean, College of Agriculture: _____

Sean Michael, Head, Department of LAEP: _____

Chris Luecke, Interim Dean, College of Natural Resources: _____

Mark Brunson, Head, Department of ENVS: _____

Section I: Request

We would like to create a Sustainable Systems Minor offered and administered through the Colleges of Agriculture (COA) and Natural Resources (CNR). The departments responsible for oversight of the minor will be Landscape Architecture and Environmental Planning (LAEP) in COA and Environment and Society (ENVS) in CNR. However, students and faculty from all nine departments in the two colleges will participate in the minor. The minor will present concepts in sustainability that can be applied in a system approach, leading to resilience in society's use of the earth's land, water and air.

Students completing the minor must take 18 credits in six different areas (see Figure 1). Six of the credits are required of all students and covered in two 3-credit courses, specifically Foundations of Sustainable Systems, a lecture course, and Communicating Sustainability, a capstone course. These two courses have been newly developed and the corresponding paperwork requesting their approval has been submitted on January 19, 2012 through the USU Provost office. These courses will be in place by Fall Semester, 2012, when the minor is implemented.

A list of existing classes appropriate for the remaining four areas (Agriculture, Food and Environmental Systems; Energy and Earth Systems; Water Systems; Social Systems) is provided as Appendix A. Students must take at least one course from each of the four areas. Additional courses appropriate for the four system areas may be developed, identified or adapted after establishment of the minor.

Students can declare the Sustainable Systems Minor at any point in their undergraduate program or (more likely) when they submit their graduation paperwork. Diplomas of students meeting the requirements of the minor will include the title of their degree and "Sustainable Systems Minor".

Section II: Need

While five land-grant institutions in the western U.S. have established sustainability degrees, only three (Arizona State University, University of New Mexico and University of Wyoming) offer minors in sustainability and only the latter two reside in a College of Agriculture and/or College of Natural Resources. Within Utah, the University of Utah markets two undergraduate degrees as "sustainability-related": Civil and Environmental Engineering; and Environmental and Sustainability Studies. The latter is somewhat similar in structure to the USU Sustainability Systems minor but emphasizes policy decisions on the environment and it is a degree program, not a minor. Westminster University and Weber State University have bachelor's degrees in Environmental Studies, both of which are marketed as "undergraduate degrees in sustainability." None of these degrees specifically links sustainability to water, agricultural, or natural resource management systems – all of which are specific strengths of Utah State University.

Here at USU, the Environmental Studies degree in ENVS is also marketed as a sustainability degree but the Environmental Studies degree is designed to offer a broad introduction to human-environmental interactions and is not specifically directed toward sustainability. USU also offers a minor in Climate Change and Energy administered by the Plants, Soils and Climate Department in COA. While both minors include some of the same classes, the Sustainable Systems minor will incorporate sustainability into agricultural and water systems, and specifically require students to understand how sustainability can be applied to biological, physical, and social systems.

In sum, Utah State University is providing an educational opportunity not currently available to undergraduate students in Utah and in the greater Mountain West.

During the 2011 USU Spring Career Fair, 15 employers at the Career Fair were asked to respond on the desirability of students who graduated with a sustainability minor. All employers indicated their interest in graduates with this emphasis. In 2010-11, the College of Agriculture had 67 students enrolled in the Interdisciplinary Studies (ITDS) degree. Of those 67 students, 11% designed a program focused on sustainability. Students in several traditional programs in agriculture have also expressed their desire for stronger focus on sustainability to their academic advisors. A survey of 42 students enrolled in an introductory course entitled Professional Orientation for Environment and Society (ENVS 1990), in Fall 2011 found that 22 (52%) hoped to pursue careers related to sustainability in ways that link human and natural systems. This represents a significant shift from past years when most ENVS majors sought careers in land management or environmental protection.

Section III: Institutional Impact

The addition of this minor to USU's educational offering requires no change in administrative structure, no additional faculty, no new physical facilities, and no modification or purchase of equipment. Existing advisors in the Student Services offices of the Colleges of Agriculture and Natural Resources will handle the paperwork for students requesting the minor. The two new courses (Foundations of Sustainable Systems and Communicating Sustainability) will be added to faculty assignments as part of the instructors' teaching load.

Section IV: Finances

All but two of the courses required for this minor are currently offered at USU. Minimal impact on enrollment in these courses is anticipated. The two new courses will be assigned as part of load within COA and CNR, with teaching assignments of the faculty involved in the courses adjusted appropriately. Thus, no new funding for this minor is requested.

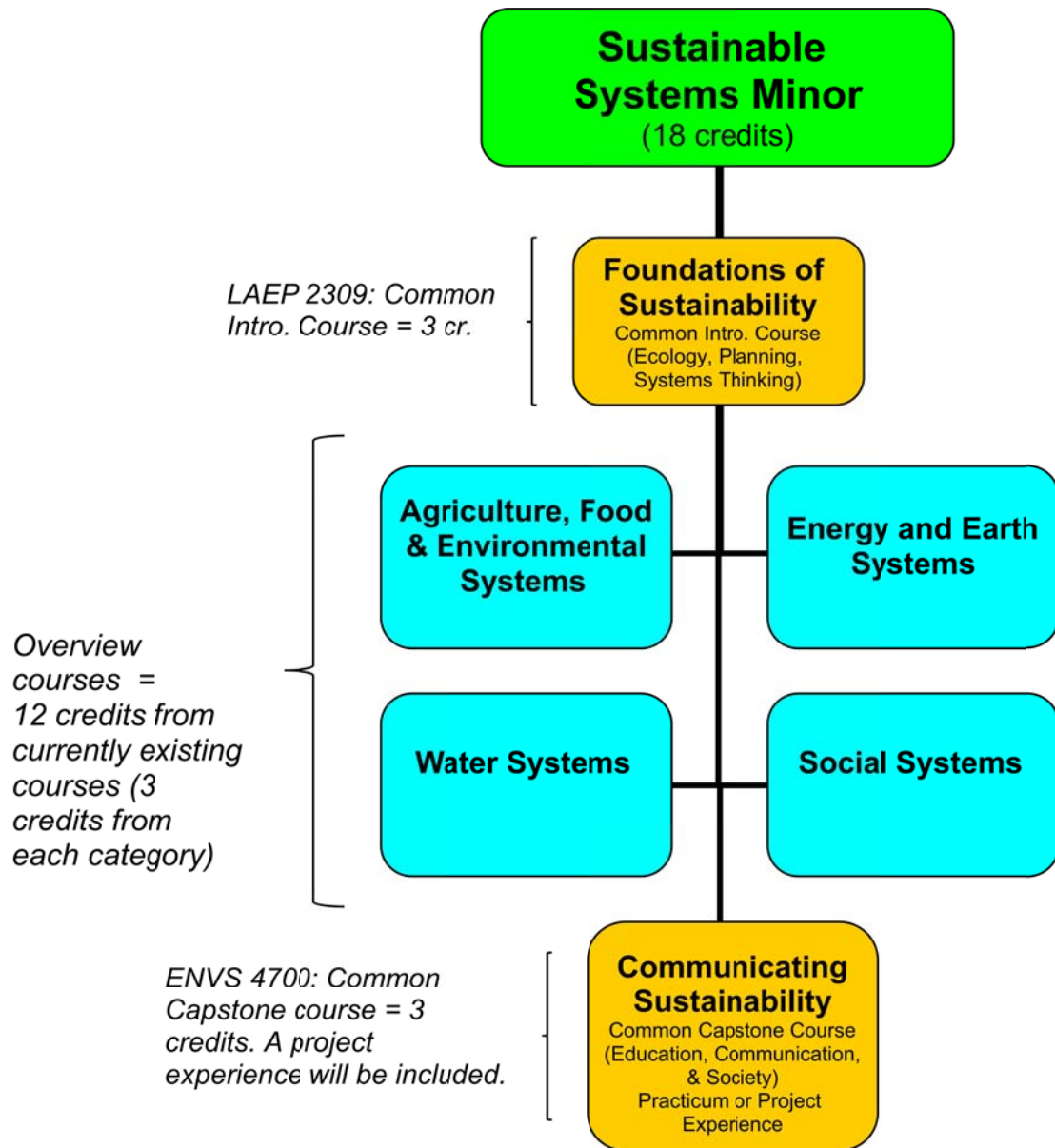


Figure 1. Overview of the Proposed Sustainable Systems Minor

APPENDIX 1

Sustainable Systems Minor Requirements (18 credits)

Required Courses (6 credits)

- LAEP 2039 – Foundations of Sustainability (3 credits) – *new course*
- ENVS 4700 – Communicating Sustainability (3 credits) – *new course*

Agriculture, Food and Environmental Systems: Select **3 credits** from the following:

- ADVS 5030 – Sustainable Agriculture Production Systems with Animals 3*
- ASTE 2900 – Humanity in the Food Web (BSS) 3
- ASTE 5260 – Environmental Impacts of Agricultural Systems (CI) 3
- NDFS 1240 – Food Literacy 3
- PSC 2800 – Fundamentals of Organic Agriculture 3
- WATS 1200 – Biodiversity and Sustainability (BLS) 3
- WILD 2200 – Ecology of our Changing World (BLS) 3

Energy and Earth Systems: Select **3 credits** from the following:

- GEO/PHYS 3150 – Energy in the 21st Century (DSC/QI) 3*
- LAEP 1030 – Introduction to Landscape Architecture (BCA) 3
- PHYS 1020 – Energy (BPS) 3
- PSC 3820 – Climate Change (DSC/QI) 3*
- PSC 4820 – Challenges in Climate Change and Energy 3*

Water Systems: Select **3 credits** from the following:

- PSC 2010 – Soils, Water, and the Environment (BPS) 3
- PSC 4000 – Soil and Water Conservation 4
- PSC 4100 – Landscape Water Conservation 2
- WATS 3700 – Fundamentals of Watershed Science (CI) 3
- WATS 4490 – Small Watershed Hydrology 4*
- WATS 4530 – Water Quality and Pollution 3

Social Systems: Select **3 credits** from the following:

- APEC 3012 – Introduction to Natural Resource and Regional Economics (DSS) 3
- ENVS 3010 – Fundamentals of Natural Resource and Environmental Policy 3
- ENVS 3330 – Environment and Society 3
- ENVS 5550 – Sustainability: Concepts and Measurement 3
- ENVS 5570 – Sustainable Living 3
- PHIL 3510 – Environmental Ethics (DHA) 3
- SOC 4620 – Sociology of the Environment and Natural Resources (DSS) 3
- SOC/ENVS 5640/6640 – Conflict Management in Natural Resources (CI) 3

* Prerequisite or Course Restriction

Cover/Signature Page - Abbreviated Template

Institution Submitting Request: *Utah State University*

Proposed Title: *Science, Technology, Engineering, Education and Mathematics (STE²M) Center*

School or Division or Location: *University-wide*

Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): *00.0000*

Proposed Beginning Date (for new programs): *07/01/2012*

Institutional Board of Trustees' Approval Date: *04/06/2012*

Proposal Type (check all that apply):

R401-5		R401-6	
<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>		<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>	
Section #	Item	Section #	Item
4.1.5.2	<input type="checkbox"/> Minor*	6.1.1	<input type="checkbox"/> Reinstatement of Previously Suspended Program
5.1.1.1	<input type="checkbox"/> New Emphasis on an Existing Degree*	6.1.5	<input type="checkbox"/> Reinstatement of Previously Suspended Unit
5.1.2	<input type="checkbox"/> Certificate of Proficiency Not Eligible for Financial Aid		
5.1.3	<input type="checkbox"/> Out-of-Service Area Delivery of Programs		
5.1.4	<input type="checkbox"/> Name Change of Existing Programs		
	<input type="checkbox"/> Program Transfer		
5.1.5	<input type="checkbox"/> Program Restructure		
	<input type="checkbox"/> Program Consolidation		
5.1.6	<input type="checkbox"/> Program Discontinuation		
	<input type="checkbox"/> Program Suspension		
	<input type="checkbox"/> Administrative Unit Creation		
5.1.7	<input type="checkbox"/> Administrative Unit Transfer		
	<input type="checkbox"/> Administrative Unit Consolidation		
5.1.8	<input checked="" type="checkbox"/> New Center		
	<input type="checkbox"/> New Institute		
	<input type="checkbox"/> New Bureau		
5.1.9	<input type="checkbox"/> Graduate Certificate		

*Requires "Section VI: Program Curriculum" of Abbreviated Template

Chief Academic Officer (or Designee) Signature:

I certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

Signature

Date: *01/27/2012*

Printed Name: *Raymond T. Coward*

¹ CIP codes must be recommended by the submitting institution. For CIP code classifications, please see <http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55>.

Utah State University
Science, Technology, Engineering, Education and Mathematics (STE²M) Center

Section I: Request

Utah State University proposes to establish a university-wide center that builds on institutional strengths in both the STEM disciplines and in Education. The Science, Technology, Engineering, Education and Technology (STE²M) Center will be dedicated to achieving three objectives: (1) to increase the number of quality STEM professionals; (2) to increase the number of quality STEM educators; and (3) to conduct innovative research on best practices in STEM education.

Section II: Need

For over thirty years the United States has recognized the need for improvement and innovation in Science, Technology, Engineering, and Mathematics (STEM) education. Repeatedly, studies and reports suggest that test scores of American students in science and mathematics are steadily declining and fewer numbers of US citizens are choosing to pursue STEM careers. Many challenges contribute to these realities, including shortages of highly qualified teachers in K-12 mathematics and science education; few opportunities for students to be involved in meaningful ways with scientists and their research; and minimal articulation between researchers/employers and educational organizations on respective needs. During the next decade, U.S. demand for scientists and engineers is expected to increase at four times the rate for all other occupations. Scientists and engineers from the Apollo and Cold War eras are now retiring, and the pipeline of STEM-trained workers will not replace the aging workforce, nor meet the escalating demands of an ever-increasing technological world. Additionally, the nation's diversity makeup is changing, and all STEM disciplines must make significant strides at diversifying the cohort of students who pursue STEM careers if we are to capitalize on the available intellectual talent that resides in our diverse nation.

Utah State University is strong in both Education and the STEM disciplines, and the proposed STE²M Center will facilitate collaborations among faculty in STEM *as well as* faculty in Education to address the national and state needs articulated above. The creation of a USU STE²M Center aligns with the mission of Utah State University and is consistent with the economic development goals of the State of Utah, which include a focus on STEM workforce needs. The Utah Governor's economic development plan has an explicit goal to "Prioritize Education to Develop the Workforce of the Future" (Utah Economic Development Plan, Office of the Governor), and development of the STEM workforce is a priority of the Governor's office, the Utah State Legislature and with Utah's business owners, as articulated in the Salt Lake Chamber of Commerce's Prosperity 2020 document.

Section III: Institutional Impact

Utah State University graduates students in science, technology, engineering and mathematics disciplines from four academic colleges: Agriculture, Engineering, Natural Resources, and Science. In addition, the USU Emma Eccles Jones College of Education and Human Services is ranked in the top 2% of graduate schools of education (currently 29th in a field of 1200; *U.S. News and World Report*) and is home to a strong, research-active group of STEM-educators. With these intellectual assets as a foundation, USU is well positioned to develop a university-wide STEM initiative intended to achieve three objectives: (1) increase the number of quality STEM professionals; (2) increase the number of quality STEM educators; and (3) conduct innovative research on best practices in STEM education.

A STE²M Center at Utah State University will help address needs in Science, Technology, Engineering and Mathematics education by coordinating the STEM efforts of the campus to maximize interdisciplinary activity and collaboration across STEM areas. The University has existing expertise in STEM education research, with over \$19 Million in competitive research awards. Established strengths at USU, such as the National Center for Engineering and Technology Education (NCETE) funded by the National Science Foundation, provide a base of discipline expertise around which the STE²M Center will facilitate cross-disciplinary partnerships to address complex issues in STEM education. By creating an environment in which to collaborate, the STE²M Center will facilitate interdisciplinary opportunities among researchers and educators presently conducting innovative work in STEM areas. Collaborators from all colleges and departments on campus will be encouraged to continue to build upon the many synergistic activities already in existence throughout different parts of the university campus, while also leveraging STE²M Center collaborations to develop future activities.

Section IV: Finances

The Utah State University Foundation Board had made the establishment of the STE²M Center their number one philanthropic priority and has raised nearly \$500,000 in start-up funds to help operate the center for the academic years 2012-2013 and 2013-2014. By July 1, 2014, the university will have in place a commitment of ongoing salary and operating funds (\$250,000) to support the long-term success of the new center. In addition, through the generosity of the Emma Eccles Jones College of Education and Human Services, space has been identified in which the STEM Center will be located. As a result of this progress, a national search for the founding director of the STEM Center has been launched with the goal of recruiting a director to begin Summer 2012.